

Informed Consent and Mining Projects: A View from Papua New Guinea

Martha Macintyre

Informed consent is increasingly perceived as a means of ensuring that people's human rights are respected—whether as the subjects of research, holders of traditional ecological knowledge, recipients of medical treatment or citizens of a nation where economic projects are being developed. Informed consent has been widely deployed among the indigenous people who are minorities within nations such as Venezuela, Peru, Australia, the United States and Canada in campaigns for greater control over their land and natural resources.¹ As an anthropologist working in the area of social and economic impact assessment in Papua New Guinea,² I have become aware of the complex intersection of the interests of mining managers, scientists assessing environmental risk and social analysts reporting on local socio-economic impact and responses when informed consent is raised as a problem. This paper explores some political and practical problems associated with gaining informed consent for mining projects. While it concentrates on issues that have emerged in the Papua New Guinean situation, parallels can readily be drawn with other countries where resource development occurs.

¹ See, for example, the document produced by a United Nations committee on this issue, "A preliminary working paper on the principle of free, prior and informed consent of indigenous peoples in relation to development affecting their lands and natural resources" [Online, cited 6 November 2006]. Available from <http://ap.ohchr.org/documents/dpage_e.aspx?m=123>. Also "The Report of The Consultation on the Future Role of the World Bank Group in the Extractive Industries (Extractive Industries Review)," illustrates the ways that human rights issues now permeate understandings of corporate responsibility, "the social licence to operate" and the rights of citizens in matters such as social and environmental impact (*Striking a Better Balance*, vol.1 [2003], p.18 ff).

² I have worked as a consultant on two mining projects in Papua New Guinea Misima in Milne Bay Province, and Lihir in New Ireland Province reference to these projects draws on my own research. On Misima I prepared the social and economic impact study with Rolf Gerritsen (R. Gerritsen and M. Macintyre, *Social Impact Study for a Proposed Goldmine on Misima, Milne Bay Province*, 2 vols., commissioned by the Department of Minerals and Energy, Papua New Guinea and Milne Bay Provincial Government [Port Moresby: IASER, 1986]. I have worked for over ten years on Lihir preparing an initial social risk assessment in 1995 and later monitoring the social and economic impact, preparing annual reports for Lihir Management Company and the Department of Environment and Conservation, Government of Papua New Guinea. I have also undertaken academic research into social change, attitudes and understandings of environmental impact and changes in health and diet funded by the Australian Research Council and La Trobe University and the University of Melbourne.

The island nation of Papua New Guinea has a flourishing mining sector that contributes over 25 percent of gross domestic product and accounts for over 70 percent of exports. Gold, silver and copper mining predominate and Papua New Guinea is the eleventh largest gold producer in the world. Large open-cut mines have been established in many places: in Bougainville (copper), an island in North Solomons Province; in Misima (gold) in Milne Bay Province; in Ok Tedi (gold and copper) in Western Province; in Porgera (gold) in Enga Province and in Lihir (gold) in New Ireland Province.

The Bougainville copper mine opened in the early 1970s but disputes over the distribution of benefits, environmental degradation and adverse social effects combined with the secessionist ideals of a large proportion of the population to generate a civil conflict that lasted over a decade.³ The mine was closed as violence erupted in 1988 and has not reopened, in spite of a peace agreement being struck in 2002. The loss of an estimated 20,000 lives, recognition of the inadequacy of environmental regulation and realization of the social costs of rapid industrialization in rural communities meant that subsequent mining projects have had to be more responsive to local people and their economic circumstances.

The majority of the population (85 percent) lives in rural areas and engages in subsistence agricultural production with some subsidiary cash cropping⁴. All mines have been located in areas that were remote from towns and devoid of any industrial or urban developments at the time of exploration. In such circumstances the mining companies are often forced to take on the role of the state—building roads, constructing schools and health centres and improving transport and communication.

The issue of informed consent for mining projects that affect communities in developed and developing countries has arisen in the context of widespread criticism of past practices. Campaigns by international organizations such as Mine Watch, Oxfam-CCA and Earthworks⁵ initially concentrated on the environmental damage generated by mining and the problems faced by communities when damage occurs that threatens their livelihoods and public health. Over the past five years there has been a noticeable shift from advocacy on environmental issues to campaigns on human rights⁶ that sometimes encompass environmental matters and

³ R.J May and M. Spriggs, eds., *The Bougainville Crisis* (Bathurst: Crawford House Press, 1990).

⁴ Paul Sillitoe provides a general overview of Papua New Guinea's economy and the place of mineral development in his book *Social Change in Melanesia: Development and History*, Cambridge University Press, 2000.

⁵ Oxfam-CAA has a mining ombudsman project who advocates for communities affected by mining in developing countries. The annual reports of the mining ombudsman are published on their website [Online, cited 6 November 2006]. Available from <<http://www.oxfam.org.au/campaigns/mining/index.html>>.

⁶ G. Evans, J. Goodman and N. Lansbury, *Moving Mountains: Communities Confront Mining and Globalization* (Erskineville AU: Mineral Policy Institute, 2001); I. Macdonald and C. Rowland, eds., *Tunnel Vision: Women Mining and Communities* (Melbourne: Oxfam-Community Aid Abroad, 2002).

sometimes deal specifically with social impact. The two aspects, the environmental and the social, are now interwoven so that often it appears that the major issue in gaining informed consent is to ensure that high environmental standards are adhered to—the assumption being that local communities have the same priorities as Western environmentalists. As a prominent Papua New Guinean professor of law has recently pointed out, this assumption is often ill-founded, especially in the period *prior* to a mining agreement:

It can be said that the most vociferous and aggressive environmentalists are those who are located or based in developed, or rich, countries. Because their governments take care of their basic survival needs they can push their environmental arguments through the media to advance their own career prospects or their own agenda. Poor people located in underdeveloped or developing countries depend wholly on mining, metal or other developmental efforts for their survival because their governments do not provide the basic survival needs of society. These people would, therefore, usually like to see the construction and continuation of these developmental activities even if these damage the environment to some extent.⁷

Borida's argument emphasizes the differences between mining in developing countries, where large projects bring employment, services and infrastructure that governments cannot afford, and mining in countries such as Australia, Canada and the United States where there are alternative sources of income and public investment, and unemployed people have social services to fall back on. The emphasis on rights of veto often ignores the economic imperatives that people in remote communities in the Pacific experience when faced with a proposal to mine. Local campaigns about environmental destruction in Papua New Guinea are almost always at their most vociferous when the mine is closing or closed—rarely before it begins.⁸

Borida's comments make clear that it is false to assume that local communities will automatically reject a mining project if they are informed that it will adversely affect their natural resources. As Van Helden observes in respect to biodiversity conservation ideals,

⁷ Surek Borida, "Extractive Industries and the Environment – Socio/Economic Dilemma Facing Developing Countries." Paper delivered at PNG University of Technology, Lae, Papua New Guinea, n.d. p.3.

⁸ Mining on Bougainville in PNG did not generate very much environmental criticism in the first decade of operations but the degradation became a political issue as unrest relating to a range of economic arrangements increased and political sovereignty became the goal of many Bougainvilleans. Since the mine closed, many international environmental groups have rallied around the environmental destruction. See, for example, the report on Bougainville Indigenous Environmental Watch. [Online, cited 6 November 2006]. Available from <<http://www.wetlandecosystems.com.au>>. At Ok Tedi, the environmental problems were a major factor in BHP's withdrawal from operations and international environmentalists have become increasingly concerned. But as Richard Jackson's 1982 study, *Ok Tedi: The Pot of Gold*, demonstrates, these were not predicted before mining began and were far less contentious during the first decade (Port Moresby: University of Papua New Guinea, 1982, pp. 87-136).

It is particularly galling that the West, which has relentlessly exploited its own natural resources and those of other people, now presents the biodiversity problem as an essentially tropical issue and itself as the saviour of the environment ...Whereas Western conservationists perceive a natural world in crisis, people in developing countries are experiencing a development problem. To many poor people the suggestion that they should bear the cost of maintaining "biodiversity" in the name of an abstract "global community" only shows that the western world cares more about tropical nature than it does about non-western people.⁹

Having worked on two mining projects in Papua New Guinea, I have observed the negotiation processes with communities prior to the beginning of mining and have been struck by the fact that the concerns of community representatives are usually those that are best described as social and economic rather than environmental.¹⁰ Rightly or wrongly, the affected people generally perceive the mining project as a form of development, poverty alleviation and as a chance to be linked to the wider (and richer) world. On Lihir, for example, where the negotiating landowners' association was vociferous in demands for compensation for damage or loss, no landowner objected to the environmental damage per se and some quickly planted gardens in order to claim higher levels of payment.

In Australia, North and South America and some Asian countries, concerns have focused especially on the land rights of indigenous peoples and ethnic minorities—groups who often have been marginalized during colonization and so tend to live in the remote areas where mining often occurs. The emphasis on free, prior and informed consent is therefore strongly linked to their political arguments about sovereignty, land rights and the attempt to redress many of the wrongs perpetrated in the past.

In most of Melanesia (Papua New Guinea, Vanuatu and the Solomon Islands, but not New Caledonia) indigenous people have retained customary land tenure over their lands and very little has been alienated by governments. In Papua New Guinea 97 percent of land is held by customary tenure. There are hundreds of different tribal groups, each with distinct languages, customs and varying ways of defining traditional relationships to their land. All are "indigenous" in the sense that they are the original inhabitants of the land, but all people have equal rights as citizens of an independent nation state. They elect national governments democratically and have a system of elected local government, enshrined in legislation, if not always evident in practice. This means that the process of obtaining informed consent is very different

⁹ F. Van Helden, *Through the Thicket: Disentangling the social dynamics of an integrated conservation and development project on mainland Papua New Guinea* (Wageningen UR: Wageningen University, 2001), p.3.

¹⁰ M. Macintyre and S. Foale, "Global imperatives and local desires: Competing economic and environmental interests in Melanesian communities," in V. Lockwood, ed., *Pacific Island Societies in a Global World* (New York: Prentice Hall, 2003), pp.149-64; M. Macintyre and S. Foale, "Politicized Ecology: Local Responses to Mining in Papua New Guinea," *Oceania*, vol.74, no.3 (2004), pp.231-51.

from that pertaining to aboriginal peoples' rights over land in Australia, Canada, Indonesia and in some parts of Asia and the United States, where the indigenous people do not have sovereign governments. Moreover, the variation in legal rights means that processes for gaining informed consent will necessarily be great. In this context I raise some of the problems that emerge from a catch-all appeal to informed consent. My examples will mainly be drawn from Papua New Guinea because I draw on my own experience there working on mining projects, but the situation elsewhere is often similar.

In principle, support for "free, prior and informed consent" (FPIC) has been endorsed by numerous intergovernmental agencies and international bodies as well as non-governmental organizations. The Extractive Industries Review conducted by the World Bank recommended that the World Bank Group recognize this right for indigenous people.¹¹ In a United Nations report on free, prior and informed consent it was noted that "There is no internationally agreed definition of the principle or mechanism for implementation"¹² and a survey of eight UN agencies found that "meaningful participation and consultation are seen as key to the principle" but that it

is to a large extent implemented on an ad-hoc basis in line with the general guidelines, legal instruments and principles through which they work. Implementation constraints or the degree of implementation can vary according to the political situation and the strength of its civil society: in addition to the capacity of UN country's offices to collaborate with the government. In practice, there are few mechanisms to measure FPIC if there is no official legal/policy mandate.¹³

A paper on prior informed consent from indigenous people in the context of environmental projects delineates the problems that emerged between a research group committed to working collaboratively on biodiversity with Mayan people in Mexico and two indigenous organizations. Hardison notes, "The sad thing here is that all the parties in the dispute are consciously working to improve the position of indigenous peoples in the world, and have deep ethical commitments to cultural survival."¹⁴ The difficulties of implementation in organizations committed to the principle of free, prior and informed consent for projects highlight the complex problem of transforming an abstract principle into a process that realizes its ideals.

¹¹ World Bank, *Striking a Better Balance*, The World Bank and Extractive Industries, The Final Report of the Extractive Industries Review, vol. 1. December, 2003.

¹² United Nations Economic and Social Council (UNESCO), "Inter-agency Support Group on Indigenous Issues Report on Free Prior and Informed Consent," paper prepared for the Permanent Forum on Indigenous Issues, 3rd session, New York, 10-21 May 2004.

¹³ UNESCO, 2004, pp. 2 and 3.

¹⁴ Preston Hardison, "ICBG-Maya: A Case Study in Prior Informed Consent," PIC/PIA Part II, *Bulletin of the Canadian Indigenous Biodiversity Network (CIBN)* Nov. 2000, p. 4 [Online, cited 6 November 2006]. [Online, cited 6 November 2006]. Available from <<http://www.cbin.ec.gc.ca/ips/ibin16.cfm>>.

Who is “the community”?

Definitions of community are notoriously problematic in the social sciences. Resource developers, international aid agencies, advocates for minorities within nation states and human rights organizations have increasingly embraced the classical notion of the organic community or *gemeinschaft*¹⁵ in their assumptions about communities—a problematic that has been explored and criticized by numerous scholars who work in developing countries.¹⁶ In the case of mining exploration in Melanesia, when “community consultations” begin, the community is usually defined in terms of those who reside in the “affected area” (another extremely difficult notion), those who have legal rights to land there and those who have customary claims or cultural associations. In many places, the community of people living in a specific area does not necessarily coincide with the group who are customary landowners. This is especially the case in countries where, because there is little employment in remote or rural areas, many people have moved away in search of work. In places where customary ownership is recognized, such as Papua New Guinea, this means that at the time of exploration and negotiation, those who have received formal education and are more familiar with the “modern” world are likely to be away in towns. The same scenario occurs in the Philippines, in Canada and in Australia. In some areas of Indonesia, such as Kalimantan and West Papua, where the indigenous peoples have not been able to exclude immigrants from heavily populated areas of Java and Sumatra, the “traditional landowners” are outnumbered by immigrants, many of whom have lived there for generations and so could be considered legitimate members of a community, even though they might not have customary claims to land. In the case of Indonesia, where resettlement has been managed by the state, these migrants have legal titles granted by the state. Effectively, this is similar to some areas of Australia where various lease arrangements obtain, but Aboriginal people may retain customary rights. The problem is both practical and legal as the terminology used in regulations and in demands for recognition of rights is often confusing. Writing of the situation in Latin America, Barrera-Hernández observes the random use of terms such as “indigenous territories,” “communities,” “peoples,” “authorities” and “organizations” by all protagonists

¹⁵ Ferdinand Tönnies, in Jose Harris, ed., *Community and Civil Society*, (Cambridge: Cambridge University Press, 2001).

¹⁶ P. Brosius, “Endangered Forest, Endangered People: Environmentalist Representations of Indigenous Knowledge,” *Human Ecology*, vol. 25, no.1 (1997), pp 47-69. T.M. Li, “Boundary Work: Community, Market, and State Reconsidered,” in A. Agrawal, and C.C. Gibson, eds., *Communities and the Environment—Ethnicity, Gender, and the State in Community-Based Conservation* (New Brunswick NJ & London: Rutgers University Press, 2001), pp. 157-79. A.L. Tsing, *Frictions: An Ethnography of Global Connections* (Oxford: Oxford and Princeton University Press, 2005).

in debates “while providing no distinguishing criteria or definitions.”¹⁷ The same could be said of arguments about mining in Papua New Guinea.

The issue then is *who* is to give consent? Is the question one of effect on a *community of people* who live, work and have rights to some areas of land? Or is the consent to be obtained from those who are indigenous and have or claim customary rights to *the land*, even when these are not recognized by the state? Is the group who is to give consent to be defined in terms of residential status, customary rights, legally recognized rights according to the national law or genealogical connection to the original customary owners?

Which people in a community give consent?

The same question has different implications too with respect to the idea of representation and recognition of traditional or customary political rights. In Papua New Guinea this issue has particular problems with respect to the constitutional rights of all Papua New Guineans as citizens. For example, if a community of customary landowners deals with a mining agreement in terms of customary modes of representative authority, the legal rights of young adult men and women are often ignored. Male clan leaders will usually be recognized as “speaking for” the community. However, at Bougainville in North Solomons Province, Porgera in Enga Province and most recently on Lihir in New Ireland Province, women have voiced their dissatisfaction with the processes that initially excluded them on the grounds of “custom.” Women from Africa, India and North and South America make similar criticisms. At the conference, “Women and Mining: Voices for Change,” held in Madang in August 2003 (organized by the Papua New Guinea Department of Mining, the PNG Chamber of Mines and Petroleum, Oxfam-CAA and the World Bank¹⁸) women from nineteen countries unanimously agreed that women must be consulted and their consent given before any project is established. They appealed to their human rights and their rights as citizens of their respective countries.

Women’s Voices and Women’s Rights

Bougainville and Lihir are both places where land is held and transmitted matrilineally. However, at the time of exploration and negotiation, women from these communities then residing on the land were unfamiliar with

¹⁷ L.K. Barrera-Hernández, “The legal framework for indigenous people’s and other public participation in Latin America: The cases of Argentina, Colombia and Peru,” in D.N. Zillman, A.R. Lucas and G. Pring, eds., *Human Rights in Natural Resource Development*. (Oxford: Oxford University Press, 2002), p. 607.

¹⁸ Conference proceedings are available on CD from Margaret Reid, Pty. Ltd., tel. 612-8094-0800.

processes of political meetings. Few spoke English and many did not feel confident to challenge their menfolk, even when they disagreed with them. As time passed they realized that in many instances men had used their positions as clan spokesperson or representative to effectively disenfranchise their wives, sisters and their sisters' children. In societies such as these, men compete for rights over land and some used the mining negotiations to win land from other clans. In a few instances where a woman was the last remaining member of her group, male relatives by marriage (all of whom were living on the land and therefore part of the community) used the mining negotiations to gain control over land that would otherwise have gone to her clan's people who were not at that time resident.

In the past, on Bougainville and Lihir, systems of customary land tenure and the complex traditions that excluded women from having a political voice meant that a woman and her kin could never "lose" land. Land could not be transferred outside the clan without complex ritual exchanges that were witnessed by all concerned. But from the mining company perspective, it is gaining consent from traditional owners in ways that men and women (at that time) agreed were in accordance with customary decision-making procedures.

Years later, when women (both those designated as landowners and others less directly affected) realized that their male relatives agreed to the use or destruction of land that they can never regain, many feel doubly betrayed. They believe now that had they been made aware of the implications of giving up rights to land, they would have chosen differently from their men. After all, in these cultures women are the breadwinners who grow the food for their families. They maintain that they should have been informed by the company of all implications and been able to give or refuse consent by virtue of their constitutional and human rights. While many concede that, at that time, women were reluctant to attend meetings or speak out, they argue that, based on previous experience of the impacts of mining on subsistence and on the lives of women and children, responsible miners should have ignored the appeal to custom and proceeded according to the national laws and to the United Nations Convention for the Elimination of Discrimination against Women.

Men too, with hindsight, will express outrage at their perceived betrayal. As the benefits fail to meet their expectations, or the effects of environmental degradation become apparent, many of the initial signatories accuse the mining company or government of trickery. On Misima, where the mine was closed in 2004, landowner groups are locked in litigation against each other over trust funds but united in their view that they were duped by the company and betrayed by their provincial government. But women at the mining conference emphasized the gender discrimination in custom and their initial exclusion from decision making as the major issues. They argued that their rights should be recognized by governments and mining companies from the outset, even when these were not acknowledged by their menfolk.

Absent Customary Landowners and Present Community Members

In Melanesia, as in most developing countries, when a mining project is established the value of land alters. It acquires a cash value where previously none had existed. Its former uses no longer determine its primary value. For example, the caldera where the mine is located on Lihir was not used for gardens because it is a geothermal region. The ground was very hot in some places, warm in others. One group used the hot rock pools to cook food, but generally the land was not valued highly because it was unsuitable for gardens. On the fringes, people who had come to live on Lihir as spouses or who had no land rights were given access to this low value land to garden. In some cases they had been there for generations and they were part of the community. According to Lihirian customary law they had no traditional land rights and the clan owners were correct in excluding them from any negotiation. However, as residents on the land, they had to move and re-establish rights in another area. The mining company was committed to providing relocation housing for Lihirians who had to move. But the landowners could legitimately claim that these other people were simply “tolerated visitors” and not entitled to housing. Should their consent have been required?

At the same time, as on Bougainville, many highly educated Lihirian people, especially those with professional qualifications, had left the island to find employment. They had not lived there as adults and had no houses on their lands. Many had married non-Lihirians, who of course had no customary rights to land there. Sometimes people had lost touch and did not know where their relatives were living. But these people often had a much better understanding of the implications of industrialization and social change than did resident landowners. Some had even worked on other mining projects. As non-residents at the time of negotiation, with no gardens or houses, but with dormant rights that traditionally they could re-invoke if they returned, should they be among those who give informed consent?

This is a crucial question, because in most developing countries there is an influx of “returnees” seeking employment near family and in a place where they have land rights. These people usually return to find employment *after* the mine has begun. Because of their higher education, broader understanding of industrialization and their rights as *citizens*, this group is often retrospectively very critical of the negotiations. In my experience in Papua New Guinea, these employed returnees are usually the leaders in political opposition to the mining agreements. They are the most articulate in their appeals to both customary and legal rights, and they are often able to make their case better because they can speak the language of mining company managers and are able to forge alliances with pressure groups outside. In Porgera, a gold mining project on mainland Papua New Guinea, this generation refers to their elders who signed the agreements over a decade

ago as “thumbprint men,” a derogatory term that refers to their illiteracy while inferring that they were dupes of the company.

In my opinion, these people should not be denied a voice in any process that affects land to which they are legitimately entitled by custom. But their absence means that prior consent is often impossible to gain. In Papua New Guinea, where newspaper advertisements are generally placed by negotiating companies as a means of informing absentees and inviting applications for employment, the first year rarely picks up even half of those who actually return once the project is underway. In places such as the Philippines and Central American nations, where many absentees are working in other countries on contracts, the process of return is even more prolonged. Gaining prior consent presents great difficulties that are often glossed over because the political criticisms emerge long after the mine has begun. People “forget” that at the time of initial negotiation the population was small, leadership was in accordance with traditions that have since changed, ideas about representation were not in question and the community comprised a different set of people with different interests.

The problem of who constitutes the community and who is enfranchised to give consent (and gain benefits) at varying stages is invariably a highly political issue in Papua New Guinea.¹⁹ In some project areas the arguments about land ownership have led to fights, lawsuits and major social problems.²⁰ Given the influx of migrants that accompanies mining projects, the subsequent intermarriage and the inevitable land transfers that occur over time, the designation of those with voting rights at any specific time is a complicated business. Already on Lihir there are political moves to disenfranchise people who have married in from other groups and the children of such mixed marriages; while these decisions have been made in order to exclude “outsiders” from the benefits, royalties and dividend payments, they would no doubt obtain in any debate about voting rights. Such measures can be discriminatory (some outsiders have lived on Lihir for generations) and certainly deny the human rights of self-determination and those of citizenship under the PNG constitution. In a period where so-called ethnic fighting between people who claim traditional land tenure and those who have settled there for reasons of employment is increasingly common—the civil unrest in the Solomon Islands being but one recent instance—it is naive to suggest that the traditional landowner is a natural, easily defined category.

¹⁹ G. Banks and C. Ballard, eds., *The Ok Tedi Settlement: Issues, outcomes and implications* (Canberra: National Centre for Development Studies, 1997); S. Toft, ed., *Compensation for Development in Papua New Guinea* (Canberra: Law Reform Commission of Papua New Guinea, Resource Management in Asia and Pacific and National Centre for Development Studies, Australian National University, 1997).

²⁰ C. Filer, ed., *Dilemmas of development: The social and economic impact of the Porgera Goldmine* (Canberra: Asia Pacific Press, 1999).

Informed Consent

The requirement of informed consent seems morally incontestable, since not to inform people of the nature and implications of a mining project effectively amounts to fraud. But it is also impossible to achieve. What information should be given? Much of the criticism of issues of information to affected communities has been made by external international critics who concentrate almost exclusively on environmental damage. Even where this is acknowledged, as in Ok Tedi and Bougainville, the extent and nature of the damage is disputed by antagonists. There are major problems in communicating scientific studies to communities where people are illiterate and where their understandings of their natural environment differ from those of scientists.

The process of providing information can never really be neutral. Scientists, even if they have no commitment to the project as an enterprise, are likely to want their findings evaluated by scientific criteria and so present them in ways that stress rigour and verifiability. Their views about the safety of, for example, toxic waste disposal, draw on other scientific research rather than newspaper reports about local people's perceptions of toxicity in another mining area. Environmentalists, on the other hand, often produce materials that document perceptions and experiences across a wide range of mining projects. They are usually based on media reports and simplified representations of chemical processes²¹ and stress adverse social or health effects of waste disposal. Mining companies that have reached the stage of seeking informed consent have already decided that a project is feasible and thus appeal to more specific information. The principles that each party appeals to will differ and the information that is considered essential for a judgment will be "partial"—possibly in both senses of the word.

The problems posed by providing information about possible or likely environmental impacts are practical, technical and have other human rights implications beyond those of consent. In many developing countries the traditional understandings of the environment derive from religious or cosmological knowledge systems and from their use of resources. Developing ways of explaining scientific predictions, models of environmental impact and understandings of temporary and permanent transformation is an essential component in the process of informing people. The research work in this area is only just beginning and as yet the majority of environmentalist activists and mining companies do not draw upon it.

Environmentalist critics usually draw on a fanciful image of indigenous people as natural stewards and custodians and of the environment prior to mining as being in some homeostatic balance with the human population.

²¹ See, for example, Oxfam-CAA Mining, *Ombudsman's Report 2003* (Melbourne: Oxfam-CAA, 2003).

Mining companies operate with another idea, that of the environment and the population as undeveloped. Both are usually incorrect in their assumptions.

There is a burgeoning literature from environmental and social scientists on the topic of traditional ecological knowledge and the ways that it meshes (or more usually fails to mesh) with Western scientific models of environmental transformation.²² These studies reveal that informing people with accurate scientific information prior to or at the beginning of a project will probably not be very useful. However, offering simplified lay explanations as part of the process of gaining consent lays companies open to the justified claim that they did not give detailed and accurate information.

Moreover, as the company is presumably trying to gain community consent, the problem of unbiased information is paramount. Should the company provide the information or should some neutral party be responsible? Does an unbiased neutral party exist? Who would fund the process? If it was the mining company, would this not lead to questions of influence and claims of conflict of interest? Is it realistic to expect the government of a developing country to pay for a lengthy and complex process of educating, informing and acquiring consent from a minority when that government considers the project to be in the national interest?

The emphasis on environmental damage derives from the interests of people in Western industrial societies whose concern derives from a longer history of environmental transformation, ecological degradation and species loss in their own countries. The social problems that tend to arise around mining operations in undeveloped countries are often of more concern to local people than the environmental issues. At the "Women and Mining" conference mentioned above, the consequences that women thought were most negative were all social in nature: alcohol consumption, violence, increases in crime, economic disparities, gambling, prostitution, family breakdown, the changes in authority structures, in-migration, problems of disaffected youth and the introduction of new diseases, most particularly HIV/AIDS. Mining companies at the beginning of a project have their own reasons for playing down the likelihood that these problems will emerge and small rural communities tend to believe that their community would not be subject to such changes. On Lihir, when I was initially consulting with community representatives about the terms of reference for long-term social monitoring, there was considerable disagreement among groups about the criteria to be employed. While the women's organizations supported the

²² See, for example, R. N. H. Bulmer, "Traditional conservation practices in Papua New Guinea," in L. Morauta, J. Pernetta, and W. Heaney, eds., *Traditional Conservation in Papua New Guinea: Implications for Today* (Boroko, PNG: Institute of Applied Social and Economic Research, 1982), pp. 59-77; Macintyre and Foale, 2004; I. Scoones, "New Ecology and the Social Sciences: What prospects for fruitful engagement?" *Annual Review of Anthropology*, vol. 28 (1999), pp. 479-507; F. Van Helden, *Between Cash and Conviction: The Social Context of the Bismarck-Ramu Integrated Conservation and Development Project* (Port Moresby: National Research Institute, 1998).

use of United Nations Human Development indices, World Health Organization criteria and Conventions such as CEDAW, the men in the landowners' association questioned the idea that any international comparisons should be used and said that they considered my suggested inclusion of human rights measures as irrelevant. While I doubt that many of them would claim this now (ten years later), their parochialism and blithe optimism about the resilience of their culture in the earlier period stands as a warning to those who place great emphasis on the prior aspect of consent as obviating later problems.

A commitment to free, prior and informed consent necessarily entails a commitment to a process of educating and informing people about the worst-case scenarios and the likelihood that some of these will occur. This means undertaking thorough environmental and social risk assessments and communicating the findings to local people in ways that are comprehensible to them. It also means undertaking research to determine the most culturally appropriate way of transmitting this information and wherever possible ensuring that people actually understand the scientific information prior to making a decision.

The most devastating environmental damage from mining and the most socially disruptive impacts have often been those which have either not been predicted, or were perceived, by the communities, if not the scientists and anthropologists who did initial environmental or social impact studies, as unlikely. Companies have been working to improve their environmental impact predictions, but this pattern does suggest that in the interests of transparency, even low risk predictions should in future be communicated fully and the reasons why the company perceives them as low risk presented so that people can make their own judgments.

Unless companies are prepared to inform people fully and, in the context of worst-case scenarios, present strategies for a company's role in averting and avoiding negative impacts, I believe that informed consent is not attained. The information and explanations will require educational programs in local languages and using media and materials that are unfamiliar to many of the people in remote communities. This task is not simple. It requires research into local understandings; education about the scientific methods used by engineers, environmental scientists, geologists, hydrologists and others; and communication of complex predictions and alternative scenarios. My experience on Lihir—where computer-generated images, videos, graphs and a range of pictorial and diagrammatic depictions of mining activities have been used—suggests that unless people have some prior familiarity with these representations, they are confusing and often disregarded.

But the requirement of informed consent raises further problems in that it privileges Western scientific views of the environment and the values attached to it over the traditional ecological knowledge of local people. Knowledge about sedimentation, acid rock drainage, or levels of toxicity in

waste (to mention just three of the issues that would reasonably be expected in an environmental impact study) is gained and assessed through technical and scientific analyses based on the traditions of Western science. Conveying the basic information often requires (over)simplification of complex chemical, physical and hydrological processes; communicating scientific risk assessments poses major problems for people who do not believe that danger is calculable or predictable, but derives from offences to spirits or trespass on sacred places.

Kirsch has described the difference between local and scientific interpretations of environmental impact as “colliding ecologies,”²³ noting the similarities between the descriptions of environmental damage by Bougainvilleans and those of people in Ok Tedi. There is a lack of fit between scientific assessments and local experience; between different notions of verifiability or proof and between narrow, materialist conceptualization of land, forest, water and air and the all-encompassing cosmologies that provide the basis for Melanesian views of the environment. In lawsuits, the scientific view prevails, sometimes in favour of the local people, as in the Ok Tedi case.²⁴ But Bougainvilleans who believed that the mining operations had poisoned their air, water and land were not supported by the scientific investigations of independent consultants.²⁵ Legislation relating to the preservation of sites of cultural significance includes some requirements that mining companies acknowledge differences between the ideas of landscape, but this does not really require any substantial modification of their world view. Any process of educational awareness prior to a project will, of necessity, have to introduce local people to the principles and practices of scientific investigation, just as one would hope that it would entail communicating local views. Such educational procedures would inevitably add considerable costs in the early stages of a project and would necessitate changes to the ways that mine financing is currently structured. It is unlikely that banks would finance a project that can be vetoed by local people at any stage. The campaigns for ethical investment that are currently being waged by groups who want to reassure mining companies that being socially responsible will encourage people to invest have so far had limited success. Company directors are likely to find it hard to convince potential shareholders that being ethical by having veto provisions in an agreement will have a positive effect on the value of their shares.

²³ S. Kirsch, “Indigenous response to environmental impact along the Ok Tedi,” in S. Toft, ed., *Compensation for Resource Development in Papua New Guinea* (Canberra: Law Reform Commission of Papua New Guinea, Resource Management in Asia and Pacific and National Centre for Development Studies, Australian National University, 1997), pp. 150-52.

²⁴ Banks and Ballard, 1997.

²⁵ D. Oliver, *Black Islanders: A personal perspective of Bougainville, 1937-1991* (Honolulu: University of Hawaii Press, 1991), p. 208.

Determining Levels of Consent

Providing information is likely to be an expensive operation and assessing whether consent has been given will be similarly difficult and costly. The idea of informed consent is derived from Western European traditions of human rights and the freedom of the individual citizen. It assumes a nation state exists to protect and maintain the rights of people and that all people are equal under the law. The appeal to rights also assumes rational individual choice so that each person is deemed capable of making decisions in respect of his or her interests and the group he or she identifies with, whether that is an ethnic group, a clan or a political party.

In view of the legal and philosophical tradition on which this principle rests, the only decisive way of determining community response or consent would be a plebiscite by secret ballot with one person/one vote. Even then, there would need to be prior agreement about whether a majority, consensus or some proportion in favour determined the outcome.

For the results of such a vote to be legally acceptable it would have to be conducted in accordance with fair and transparent electoral principles. This would require preparation of an electoral roll of all eligible voters; management of the plebiscite to ensure that there was no fraud, undue pressure or bribery of participants and no tampering with ballot boxes or results. Once again the question of who would finance and manage such a process would be a contentious issue. Ideally the government should be the initiator and the agent for the plebiscite, but as the community might be in conflict with the government over approval of the mine, this would be problematic. The OK Tedi case in Papua New Guinea also illustrates the problems that arise when the government is a shareholder. If the mining company financed and conducted the process, there would be a danger of bias and special interest that could taint the result. Perhaps the ideal solution would be for all interested parties to establish and jointly fund an external body that could ensure that standards of communication and information are maintained and evaluated, and that the process of gaining consent is conducted with due respect for the human rights of the affected people.

Some Brief Conclusions

The catch-cry for free, prior and informed consent is easily made and very hard to implement faithfully. If a commitment is to be made in good faith, then I think that it cannot be made without a detailed presentation of principles, processes and responsibilities of all parties. Given the changes in the constitution of the affected community and the customary landowners prior to and over the life of a mine, I think that the emphasis on prior consent is not going to solve the problems its proponents envisage.

It would be more realistic, and ultimately more just, to require that agreements between local communities and mining companies are regularly

reviewed and that there is a process of continuing education and dissemination of information relating to negative impacts associated with the right of communities to withdraw consent for later changes. I think that the right to renegotiate the agreement should be established from the outset, and that any changes in mining processes, ore through-put, employment policies or other procedures that could have a negative effect on the natural or social environment should be grounds for review and renegotiation. But as the case of Bougainville demonstrates,²⁶ reviews easily can become confrontations and political struggles for control of the resource itself. On Lihir, where provisions for review of the integrated benefits package were established as part of the agreement, the negotiating committee unsuccessfully attempted for over five years to gain far more extensive benefits and stalled cash payments to local people.

The implications of a commitment to free, prior and informed consent are extensive for the community and financially costly for the government or company that has to undertake the procedure. Undertaking a census, compiling an electoral roll of people in accordance with the principles of who is rightfully a customary owner, accurately informing people of all the issues they are consenting to in an open and appropriate way, ensuring that the vote is conducted democratically and being prepared to accept a negative vote from the community as an effective veto are part and parcel of a commitment to free, prior and informed consent.

Neither the mining companies nor the NGO proponents have really considered the implications of free, prior and informed consent, nor how it might be reasonably achieved in practice. Mining companies tend to read it simply as right of veto, while many NGOs appear to believe that it would effectively mean that mining activities involving environmental degradation would automatically be rejected. In cases where gross disregard for the rights of local communities has been associated with the establishment of a mine, such has occurred in the Philippines, Africa and Indonesia, the government wanted the mine to proceed and was prepared to forcibly remove local people who did not agree.²⁷ If a company sought in such circumstances to seek community consent, then an oppressive state would still be able to forcibly evacuate the area and so deprive people of all land as well as their rights. I strongly support the objective, but I fear that without clear guidelines or procedures it will become a token activity that is no advance on community

²⁶ T. Wesley-Smith, "The Non-Review of the Bougainville Copper Agreement," in M. Spriggs and D. Denoon, eds., *The Bougainville Crisis, 1991 Update*, Politics and Social Change Monograph (Bathurst: Crawford House, 1992), p. 92.

²⁷ (Oxfam-CAA: 2003; Earthworks and Oxfam America, *Dirty Metals: Mining, Communities and the Environment*, 2004. [Online, cited 6 November 2006]. Available from <http://www.nodirtygold.org/dirty_metals_report.cfm>.

consultation, which at present can mean anything from all of the processes I have suggested above to having an informal chat with a few men who designate themselves community leaders. Unless commitment is matched by an agreement to a clearly defined set of principles and processes it will be a sham.

University of Melbourne, Australia, 2007

Copyright of Pacific Affairs is the property of Pacific Affairs and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.